

REMARKS

Claims 1, 3-12, 14, 16-24 and 26-30 are pending in this application. By this Amendment, the specification, the drawings and claims 1, 6, 8, 14, 16, 22, 23, 24, 26, 27, 29 and 30 are amended, and claim 25 is canceled without prejudice to or disclaimer of the subject matter contained therein. Although Fig. 3 was not objected to, Fig. 3 has been amended to obviate the typographical errors for reference characters 200, 201. No new matter is added.

Entry of the amendments is proper under 37 CFR §1.116 since the amendments:

(a) place the application in condition for allowance for the reasons discussed herein; (b) do not raise any new issue requiring further search and/or consideration since the amendments amplify issues previously discussed throughout prosecution; (c) satisfy a requirement of form asserted in the previous Office Action; (d) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (e) place the application in better form for appeal, should an appeal be necessary. Entry of the amendments is thus respectfully requested.

Applicants appreciate the courtesies extended to Applicants' representative during the February 24, 2004 personal interview with Examiner Burch. Applicants' separate record of the substance of the interview is incorporated into the foregoing and following remarks.

Applicants appreciate that claims 1, 3-7 and 9-12 are allowed.

Applicants also appreciate that claims 23-29 would be allowable if rewritten to overcome the rejection under 35 U.S.C. §112, second paragraph, and to include all of the features of the base claim and any intervening claims. Applicants gratefully appreciate the indication of allowable subject matter found in claims 23-29. However, it is respectfully submitted that claims 8, 14, 16-22 and 30 are also allowable in view of the foregoing amendments and following remarks.

I. Formal Matters

The Office Action objects to the drawings under 37 C.F.R. §1.83(a). In particular, the features of "at least one pressure chamber" and "the two pressure chambers of the master cylinder" as found in claims 14 and 18, respectively; "the master reservoir being larger than the pressure chamber" as found in claim 8; "reservoir chamber being larger than the pressure chamber" as found in claim 9; and "the bottoming condition detection based on an increasing gradient of the stroke" as found in claim 20, must be shown in the drawings.

In amended Fig. 1, the master cylinder 14 has been amended to depict "at least one pressure chamber" and "the reservoir chamber being larger than one of the pressure chambers". In particular, the master cylinder 14 has been divided to include "at least one pressure chamber". With regard to the "reservoir chamber being larger than one of the pressure chambers", the reservoir chamber 114 has been amended to depict a chamber by outlining an enclosure. Further, it is respectfully submitted that drawings in patent applications do not necessary have to be to scale. Fig. 1 is only a schematic representation of the invention.

With regards to the "master reservoir is larger than the pressure chamber", claim 8 has been amended to recite that the reservoir chamber is larger than the pressure chamber.

With regards to the "bottoming condition detection", the bottoming condition is the condition in which two pressure pistons contact each other in the master cylinder, as described in paragraph [0051]. Further, as shown in Figs. 12a and 12b, the bottoming condition can be detected when the increasing gradient of the operation power is larger than the predetermined increasing gradient, as described in paragraphs [0055] and [0056]. Thus, it is respectfully submitted that Figs. 12a and 12b depict the "bottoming condition detection."

Thus, reconsideration and withdrawal of the objection are respectfully requested.

The Office Action rejects the specification under 35 U.S.C. §112, first paragraph. In particular, the Office Action states that "normal condition (without the assist control)" found in paragraph [0044] is not clear, concise and exact. However, it is respectfully submitted that the term "normal condition (without the assist control)" is clearly shown in Fig. 9, which is the pressure of the brake operating power without the set load of the return spring. However, Applicants have amended to specification to more clearly disclose the invention. In particular, paragraph [0044] has been amended to reflect Fig. 9. The change to the specification corrected an obvious ambiguity between paragraph [0044] and Fig. 9. When read in context, it is clear the specification as filed had a typographical error that has been corrected. Thus, reconsideration and withdrawal of the rejection are respectfully requested.

The Office Action objects to claims 14 and 22-29 as containing informalities. By this Amendment, claims 14 and 22 have been amended to obviate the objections. Thus, withdrawal of the objection is respectfully requested.

The Office Action rejects claim 8 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirements. However, it is respectfully submitted that claim 8 has been re-amended to claim the reservoir chamber is larger than the pressure chamber in the master cylinder, as originally filed. Applicants have amended paragraph [0023] to include this feature. No new matter is added as the size of the reservoir chamber was originally recited in claim 8. Thus, reconsideration and withdrawal of the rejections are respectfully requested.

The Office Action rejects claims 14, 22-29 and 30 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. By this Amendment, claims 14, 22, 23 and 30 have been amended to obviate the rejection. Thus, withdrawal of the rejection is respectfully requested.

II. The Claims Define Patentable Subject Matter

The Office Action rejects claims 22 and 30 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 5,951,116 to Nagasaka et al. (hereinafter "Nagasaka"); and rejects claims 16-21 under 35 U.S.C. §103(a) as being unpatentable over Nagasaka in view of U.S. Patent 4,867,509 to Maehara et al. (hereinafter "Maehara"). The rejections are respectfully traversed.

Nagasaka and Maehara, individually or in combination, fail to disclose or suggest the failure detector having a bottoming detector which detects a bottoming condition in the master cylinder based on whether an increasing gradient of the brake operating amount detected by the brake operating amount detector is larger than a predetermined gradient, as recited in claim 16, and similarly recited in claims 22 and 30.

Claims 22 and 30 have been amended to include some of the subject matter found in claim 16. Thus, it is respectfully submitted that Nagasaka and Maehara fail to disclose or suggest the claimed invention.

The Office Action alleges, on page 7, that Maehara discloses a "use of a brake device including a bottoming detector 55 which detects a bottoming condition in the master cylinder based on whether an increasing gradient or "stroke of movement" of the brake operating amount." That is, it appears that the Examiner is alleging that the "stroke of movement" is the same derivative or gradient of the brake pedal position which operates the braking amount. However, it is respectfully submitted that the "stroke of movement" found in Maehara, cannot detect a bottoming condition based on whether an increasing gradient of the brake operating amount is larger than a predetermined gradient. In other words, the bottoming condition in Applicants' invention is when the master cylinder contacts the two pressure pistons such that the amount of the operating stroke is kept constant or the increased gradient is very small, as described in paragraphs [0056] and [0057]. In fact, Figs. 12a and

12b in Applicants' disclosure disclose that the amount of the stroke and the changing gradient of the stroke are distinct features as Fig. 12(a) shows amount of operating power and Fig. 12(b) shows the stroke movement.

Accordingly, Nagasaka and Maehara, individually or in combination, fail to disclose or suggest the failure detector includes a bottoming detector which detects a bottoming condition in the master cylinder based on whether an increasing gradient of the brake operating amount detected by the brake operating amount detector is larger than a predetermined gradient, as recited in claim 16, and similarly recited in claims 22 and 30.

For at least these reasons, Applicants respectfully submit that Nagasaka and Maehara, individually or in combination, fail to disclose, teach or suggest the features recited in independent claims 16, 22 and 30. Claims 17-21, 24 and 26-29, which depend from independent claims are likewise distinguished over the applied references for at least the reasons discussed above, as well as for the additional features they recite. Reconsideration and withdrawal of the rejections are respectfully requested.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:

Replacement Sheets
Petition for Extension of Time

Date: April 6, 2004

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